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ABSTRACT

Dissemination activities for the Decision Support Systems (DSS) for fiscal year (FY) 1985 are reported by the National Center for Higher Education Management Systems (NCHEMS). The main means for disseminating results of the DSS research and development project has been through computer-generated video presentations at meetings of higher education administrators and officials. For 13 presentations at 1985 professional meetings, information is provided on: the name of the association/school, the occasion, the location, the date, the presentation title, and the number in attendance. A secondary dissemination approach is the "NCHEMS DSS Demonstrator," a series of templates that works as a teaching tool for administrators and officials. The Demonstrator includes four application models for common college and university decision support systems: enrollment management, faculty database, budget development, and long-range financial planning. The Demonstrator has easy-to-follow formatting and provides technical notes on specific techniques to take advantage of the features of Lotus 1-2-3. In addition to describing features of the DSS Demonstrator, information is provided on the number of copies that have been distributed and the types of institutions that were customers. (SW)

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# Funder Report on Decision Support Systems Project
# Dissemination Activities
# Fiscal Year 1985

William L. Tetlow

November 30, 1985

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National Center for Higher Education Management Systems

# Funder Report on Decision Support Systems Project Dissemination Activities Fiscal Year 1985

The results of the Decision Support Systems (DSS) research and development project have been disseminated to the higher education community in a variety of ways. The principal means has been through dynamic computer-generated video presentations at international, national, and regional meetings of higher education managers, administrators, and senior officials. Over 1300 individuals viewed these presentations in this fiscal year. In addition, notices have been placed in the Chronicle of Higher Education, direct mailing flyers have been sent to members of other professional organizations such as CAUSE, and reviews have appeared in major professional journals. Very satisfied users of the NCHEMS DSS Demonstrator and individuals who have witnessed the video presentations have informed others about the benefits and have thus become a very effective secondary dissemination conduit.

## A. Presentations at Professional Meetings - Fiscal Year 1985

1. CAUSE (The Professional Association for Development, Use and Management of Information Systems in Higher Education)
1984 National Conference
Orlando, Florida
December 3-7, 1984
"Decision Support Systems" moderated by Vinod Chachra, Virginia Polytechnic University.
Attendance 25

2. COPA (Council on Postsecondary Accreditation)
1985 Annual Assembly
Philadelphia, Pennsylvania
April 17, 1985
"Higher Education Data for Decision Support"
Attendance 75

3. WICHE (Western Interstate Commission on Higher Education)
Conference on Management Information Systems
Honolulu, Hawaii
April 26, 1985
"Decision Support using Microcomputers"
Attendance 50

4. The University of Hawaii
Special presentation on DSS for senior officials
Honolulu, Hawaii
April 24, 1985
"Using MIcrocomputers for Decision Support"
Attendance 20

5. AIR (Association for Management Research, Policy Analysis, and Planning)
25th Annual Forum
Portland, Oregon
April 28 - May 1, 1985
4 Presentations
Attendance 25 - 200

a. "Decision Support Systems: The Realities for Higher Education"
Attendance 150

b. "Intentional and Unintentional Consequences of Microcomputer Use in Institutional Research"
Attendance 35

c. "Building DSS with Lotus 1-2-3"
Attendance 200

d. "Communications and Computer Networking"
Attendance 45

6. SCUP (The Society for College and University Planners)
1985 Annual Conference
Chicago, Illinois
July 8,1985
"The DSS Demonstrators"
Attendance 125

7. HEDS (Higher Education Data Sharing Conference)
1985 Annual Summer Workshop
Tufts University
Medford, Massachusetts
July 18, 1985
"Tools for Building DSS"
Attendance 65

8. NMSI (NCHEMS Management Services, Inc)
Management Seminars
Boulder, Colorado
5 Presentations

a. "Introduction to Decision Support Systems"

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|---|---|
| July 23, 1985 | August 20,1985 |
| Attendance 15 | Atendance 16 |

b. "Building Effective Decision Support Systems"

| | |
|---|---|
| July 25-26, 1985 | August 22-23, 1985 |
| Attendance 15 | Attendance 20 |

c. "Improving Resource Allocation Decisions Through Analysis and Evaluation"

| | |
|---|---|
| January 16, 1985 | August 7,1985 |
| Attendance 10 | Attendance 5 |

9. SHEFO (State Higher Education Finance Officers)
1985 Annual Conference
Keystone, Colorado
August 9, 1985
"Using Microcomputers for Decision Support"
Attendance 35

10. NCHEMS
1985 National Assembly
Denver, Colorado
September 22-24, 1985
3 Presentations
Attendance 20 - 75

a. "Decision Support Systems: Micros and Management"
   September 23 — Attendance 75
   September 24 — Attendance 35

b. "Micro Trends"
   Attendance 25

11. AITEA (Australian Institute of Tertiary Educational Administrators)
Invited Presentations (Expenses paid in full by AITEA)
October 1 - 17, 1985
5 Presentations
"Using Microcomputers for Decision Support"

a. Darling Downs Institute
   Toowoomba, Queensland
   October 1, 1985
   Attendance 20

b. Griffith University
   Brisbane, Queensland
   October 4, 1985
   Queensland State AITEA Conference
   Attendance 75

c. The University of Sydney
   Sydney, Australia
   October 11, 1985
   New South Wales State AITEA Conference
   Attendance 25

d. The Australian National University
   Australian Capital Territory
   October 15, 1985
   A.C.T. AITEA Conference
   Attendance 25

e. LaTrobe University
   Melbourne, Victoria
   October 17, 1985
   Victoria AITEA Conference
   Attendance 60

12. RMAIR (Rocky Mountain Association for Institutional Research)
1985 Annual Conference
Jackson Hole, Wyoming
October 10, 1985
"Advances in Micro-based Decision Support"
Attendance 35

13. PNAIRP (Pacific Northwest Association for Institutional Research and Planning)
1985 Annual Conference
Seattle, Washington
November 7, 1985
"New Tools for Decision Support"
Attendance 35

B. Distribution of NCHEMS DSS Demonstrator

1. Over 500 NCHEMS DSS Demonstrators have been distributed since it was released in September 1984. In FY85 there were 365 distributed; an average of one every calendar day.

2. Copies have been distributed to 47 states, the District of Columbia, Puerto Rico, and five foreign countries (Canada, Australia, England, Scotland, and South Africa)

3. 374 Non-duplicated institutions have obtained copies:

| | |
|---|---|
| 7% | Very small institutions (under 1,000 students) |
| 40% | Small institutions (1,000 to 5,000 students) |
| 19% | Medium institutions (5,000 to 10,000 students) |
| 20% | Large institutions (10,000 to 20,000 students) |
| 13% | Very Large Institutions (Over 20,000 students) |

4. Distribution by type of institution was as follows:

| | |
|---|---|
| 30% | 4-year Public |
| 24% | 4-year Private |
| 18% | 2-year Public |
| 14% | Multiple copies to institutions |
| 14% | Miscellaneous (Commissions, individuals, etc.) |

5. Of the two versions released the distribution was:

| | |
|---|---|
| 85% | IBM PC or compatible version |
| 15% | DEC Rainbow 100 version |

C. Software Reviews

The following review will appear in the next issue of the Journal of the American Association of University Administrators (AAUA). The reviewer was chosen by the journal editor.

Software Review

## NCHEMS' DSS DEMONSTRATOR

Ask yourself honestly if you don't find yourself in one or more of the following situations:

- you're trying to think through how to model some administrative problem (enrollment planning, budget projections, faculty retirements...) and believe someone must have wrestled with this one before;
- you've developed a complex worksheet that you and others will use again, but it's such a mess no-one else can understand it;
- you've used some of the features of Lotus 1-2-3 (TM) a lot, but others are difficult to understand; you want to write poetry but feel you're speaking the computer equivalent of pidgin English.

If you answer yes to any or all of these, it would be worth spending some time with the DSS Demonstrator developed by William L. Tetlow and Paul T. Brinkman for the National Center for Higher Education Management Systems (NCHEMS).

### Features

The DSS Demonstrator is a series of templates, designed for use with Lotus 1-2-3 (TM) from the Lotus Development Corporation, with the IBM (R) Personal Computer, Compaq Personal Computer, or other fully IBM-compatible computers. A version also exists for the DEC Rainbow 100. Release 1 is dated September, 1984, and is available from the Management Products Division of NCHEMS at P. O. Drawer P, Boulder Colorado, 80302. (Telephone 303-497-0386) The Demonstrator is not copy-protected, and requires a minimum of 192K of RAM memory. This reviewer suggests that additional memory will be required in order to use the financial templates to full advantage.

The Demonstrator assumes that you are familiar with the operation of your IBM (R) Personal Computer or equivalent, and that you have a basic working knowledge of Lotus 1-2-3 (TM). The Demonstrator will be of maximum use to the relatively new user of both the hardware and the software, but has much to say to the experienced spread-sheet user as well.

Tetlow and Brinkman named their product with care. The DSS Demonstrator is, in the best sense, a teaching tool. The authors perceived, correctly in my view, that it is often difficult to deduce useful applications for a powerful tool. An integrated spreadsheet package can do a great deal; but how does one go about using its strengths to best advantage? The manual that comes with Lotus 1-2-3 (TM) is excellent, but is, of necessity, general-purpose in its orientation. The Demonstrator is a bridge between the general-purpose tool and institution-specific applications.

A classroom skilled instructor works at several levels at the same time. On the surface, the teacher introduces you to generic solutions to generic problems. The DSS Demonstrator includes four well-worked out application models for common college and university decision support systems — enrollment management, a faculty data base, budget development, and long-range financial planning. In the course of working through this material, the instructor also familiarizes you both with good practice in the field and with tools that are applicable to a far wider range of problems than those encountered in class. Just so, the DSS Demonstrator preaches and practices attractive, easy-to-follow formatting, and provides numerous technical notes on specific techniques which take full advantage of all the features of Lotus 1-2-3 (TM).

Some folks, fed up with obfuscating or incomplete documentation, test all software products by immediately inserting the diskette to see whether the system works and is self-explanatory. The DSS Demonstrator passes this test, better than most. But this test misses the point of the Demonstrator. This is not a tool to be used for its own sake, like a new graphics package. Its purpose is to teach you, to change the way you think about problem-solving and about using computer software to help support decisions. When you are thoroughly familiar with the Demonstrator, you will put it away and use what you have learned to develop your own tools, based perhaps on those displayed in the Demonstrator, but adapted or entirely reworked to fit your own situation.

The accompanying documentation, in an 8 1/2 x 11" loose-leaf notebook format, is an integral part — and perhaps the most helpful part — of the package. It includes an excellent review of the underlying concepts of decision support systems as well as a clear and systematic step-by-step walk-through of each of the applications presented.

"Enrollee" is an enrollment projection model which "incorporates a minimum number of cause-and-effect relationships that affect enrollment patterns." As first model, while somewhat simplistic, formats the problem in a way which can be replicated with more sophistication to fit the particular market conditions and internal flow dynamics of specific institutions. Most important, this model introduces you to Tetlow's and Brinkman's ideas on "good practice" in spreadsheet formatting. The model is "screen-based", with each screen full of information internally self-sufficient. A map of the entire spreadsheet is provided, so the user can move easily from screen to screen, following the logic of the exercise. Basic instructions in the use of the template are supplied in an early screen. This discipline is followed throughout the Demonstrator.

"Faculty" is a faculty database template, designed to familiarize the user not only with an approach to assembling faculty data bases, but with the database features of Lotus 1-2-3 (TM). This reviewer found the "Faculty" template the most useful of all, since some of the database functions in Lotus 1-2-3 (TM) seemed difficult to follow in the Lotus documentation. This template, as with the others, includes a number of technical notes, on storing vs. displaying data fields, data security, calendar functions for automatic updating of faculty ages, and the like. Of particular interest are the ways of extracting summary statistics from the data-base, including creation of histograms to display distributions.



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"Financel" and "Finance2" are medium-range budget modelling and longer-range financial modelling packages. "Financel" deals in reasonable detail with revenue sources and with expenditure items by function (e.g., instruction) and by object (e.g. compensation levels, supplies...). Unusual among budgeting packages, "Financel" deals with balance sheet modelling as well as current funds revenues and expenditures. "Finance2" demonstrates ways of modelling alternative endowment payout policies, alternative tuition strategies, and the like. Both of these models are particularly strong in showing you how to link key variables and to organize your data. At each stage, the Demonstrator uses careful technical notes to explain the clever macros used to accomplish each of the major steps. Pre-formatted graphs are used at several points to illustrate the graphics capabilities of the system.

## Follow-on products

William L. Tetlow and a new NCHEMS associate, Leah R. Hutten, have formed a wholly-owned subsidiary of NCHEMS called Vantage Information Products, Inc. (VIP) to develop and market microcomputer products. They have just announced a series of decision support models which take off from, but build further on, the basic models in the Demonstrator. While this reviewer has not seen the new products, it seems fair to assume that they are more sophisticated models in each of these planning or management areas, which could perhaps be used as is by colleges and universities. In addition, VIP has developed a series of "building blocks", add-in worksheet modules for use with Lotus 1-2-3 (TM), and an "enrollment analysis system."

## Summary

If what you are looking for is a decision support system you can use directly for your own college or university, the DSS Demonstrator is not for you. You will be disappointed. (You also don't understand the concept of a decision support system; you can't buy one, you have to build one for your own institution.) The Demonstrator is just what it says it is: a teaching tool, not a prescriptive application model. As in taking a course, you have to attend class and do the homework to get the most out of it. If you spend time with the Demonstrator, you will find yourself arguing with the teacher about the disciplines imposed and the construction of the problems. Some of the material you will know already, and some of what you learn you will not use again. But you will also discover that you have learned new and helpful ways to think about certain decision problems and about good practice in the field.

November 27, 1985

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